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**(54) METHOD AND APPARATUS FOR MEASURING
ELASTICITY**

(57) Abstract:

PURPOSE: To obtain a ratio of elastic values of an observing point to a reference point to represent levels of the elasticities of the points by obtaining a ratio of distortions of the reference point on a predetermined straight line extended in a specimen to be inspected to a predetermined observing point on the line in an extending direction of the line.

CONSTITUTION: A signal of a specimen tomographic image from a detector 16 is formed as a display signal by a scan converter 16, and the tomographic image is displayed on a display unit 17. A displacement of the specimen in a linear direction extended in an x direction of the specimen detected by displacement detecting means 14 is input to a differentiator 21 to calculate a distortion $\varepsilon_{xx}(x)$ of x direction. A distortion $\varepsilon_{xx}(A)$ of a reference point A of them is stored in a sample-and-hold circuit 22, and a ratio of the distortion $\varepsilon_{xx}(A)$ to the distortion $\varepsilon_{xx}(x)$ continued thereto is obtained by a divider 23. A ratio $r_{xx}(A)/r_{xx}(X)$ is a ratio $G(x)/G(A)$ of an elastic modulus in shear of the points A and x. This ratio is converted to a display signal by the converter 16 to be superposed on the tomographic image of the

specimen, and a hard part in the specimen is color-displayed by a luminance responsive to the hardness.

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